

# What is the best anesthetic management for percutaneous radiologic gastrostomy in ALS patients?

## AUTHORS

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## REFERENCES



## INTRODUCTION

A new anesthetic protocol was adopted at UC Davis in Nov. 2020 for placement of gastrostomy tubes in ALS patients via percutaneous radiologic gastrostomy (PRG). It advised monitored anesthetic care (MAC) instead of general anesthesia (GA) to mitigate the risk of respiratory depression and failure to extubate in ALS patients. However, there is limited evidence to support the best protocol for PRG anesthetic management in ALS patients.

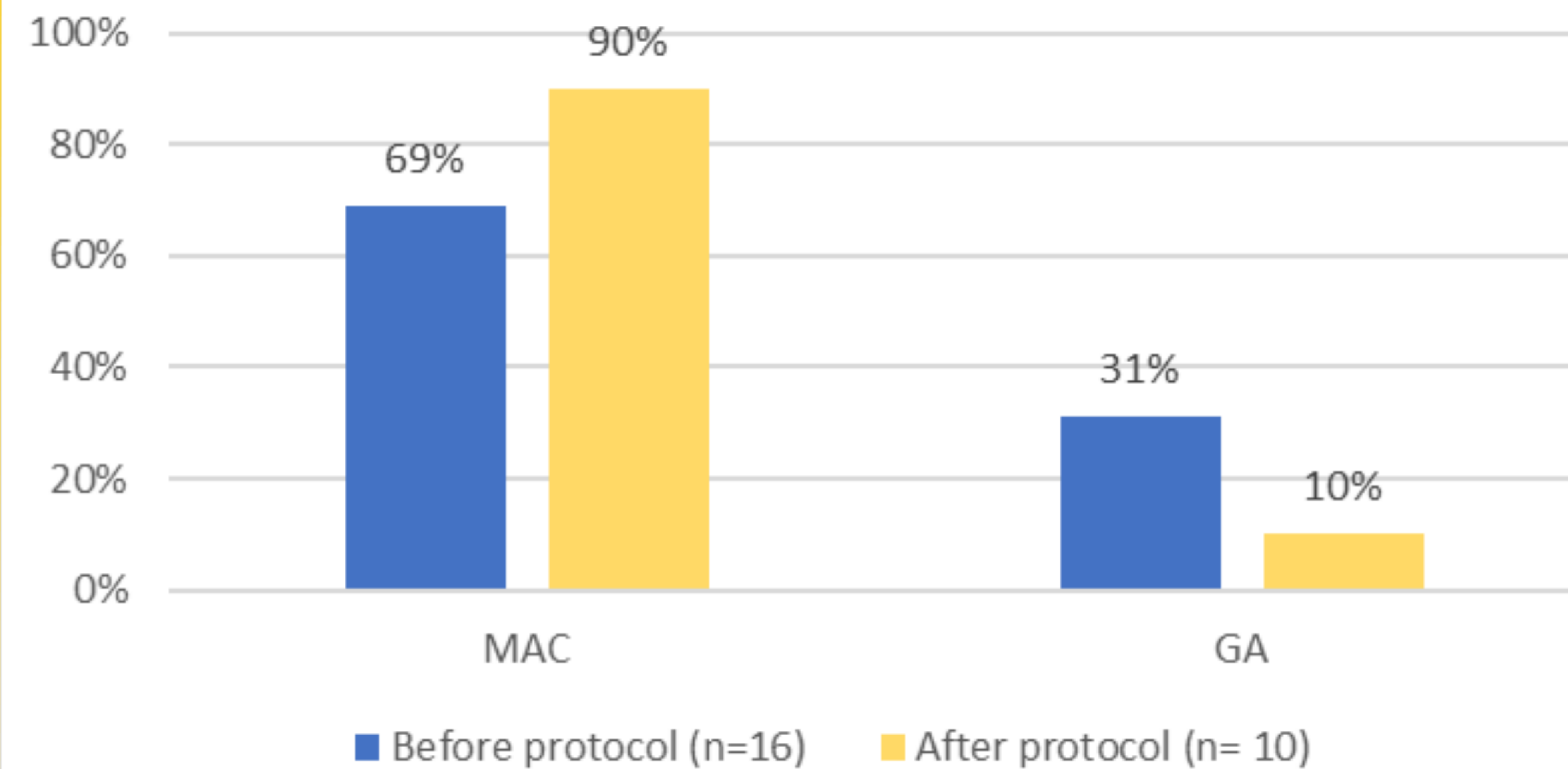
## OBJECTIVE

“ To evaluate the impact of a formal anesthetic protocol on the peri and post procedural outcomes of ALS patients undergoing PRG.

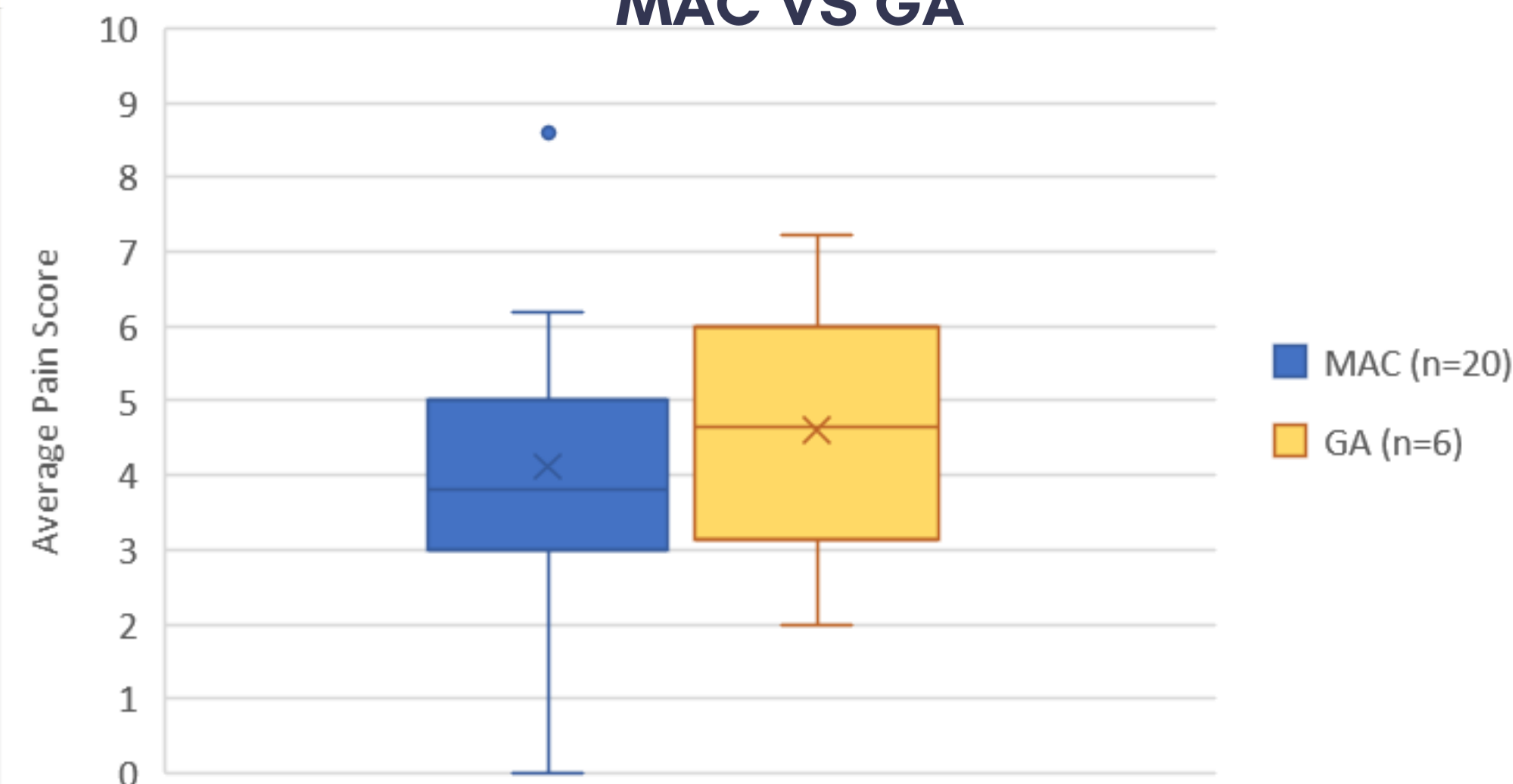
## MATERIALS AND METHODS

- Retrospective review of ALS patients who underwent PRG placement at UCDCMC identified 26 patients
- Data regarding hospital course and clinical outcomes were collected and analyzed.
- Chi-square ( $\chi^2$ ) test was used to assess significance of protocol impact on anesthesia method used.
- Welch's *t*-test was used to compare average pain scores of MAC versus GA

## FREQUENCY OF ANESTHETIC METHOD: BEFORE AND AFTER PROTOCOL CHANGE



## COMPARISON OF AVERAGE PAIN SCORES OF MAC VS GA



## RESULTS

- Occurrence of GA decreased from 5 to 1 after protocol change. However,  $\chi^2$  statistic was 1.57 and the p-value was 0.21, therefore not statistically significant.
- Results of the Welch's *t*-test showed no statistically significant difference in average pain scores between MAC and GA groups, with a *t*-statistic of -0.58 and a two-tailed p-value of 0.577.
- No patients had major peri-procedural complications.
- 30 day mortality was zero.

## DISCUSSION

Results show that protocol implementation decreased the use of GA. Although not statistically significant given the small sample size, the results are clinically significant in that the goal of reducing the utilization of GA for ALS patients undergoing PRG was achieved.

Further research with a larger sample size or longer follow-up period is needed to conclusively determine the impact of the protocol implementation. Overall, the results of this study highlight the need for ongoing research and refinement of anesthetic management protocols for patients with ALS, a population with unique considerations and challenges.